

Serial No. 10/643,946

ASA-1145

Amendment

Responsive to Office Action dated May 17, 2007

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REMARKS**Pending Claims**

Claims 6-9 remain pending. Claim 6 has been amended. No new matter has been added.

**Certified Priority Document**

Applicants thank the Examiner for acknowledgment of the claim for priority. In the Office Action the Examiner states that a certified copy of JP 2002-247952 has not yet been filed. However, as shown by the attached copy of the date-stamped mail room receipt, the certified priority document was filed with the application papers on August 20, 2003. Additionally, a copy of the certified priority document can be found in the Image File Wrapper of Private Pair for the above application, but has been incorrectly identified by the Patent Office as a 26 page Foreign Reference Prior Art filed on 08-20-03. The first page of that item printed from PRIVATE PAIR is also enclosed.

**Claim Rejections under 35 U.S.C. §§102 and 103**

Claims 6 and 7 have been rejected under 35 U.S.C. §102(b) as being anticipated by Japanese Patent Publication No. 10-192653. Claims 8 and 9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Japan '653. Applicants request reconsideration of the rejection in view of the foregoing amendments and for the following reasons.

Applicants have amended claim 6 to set forth that the mole number of W is less than the mole number of Ni, and the mole number of Ni is less than the mole number of Al. Support for the amendment to claim 6 is provided in the Specification

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on page 4, lines 4-22. In particular, the specification states that the mole ratio of Ni to Al is preferably 5/95 to 40/60 and the percentage of PFC decomposition at low temperatures can be increased by adding W in an amount of 0.1 to 10 wt%.

At the minimum amount of Ni (i.e., Ni:Al=5:95), the amount of Ni is 5 mole and the amount of Al is 95 mole. When the maximum amount W of 10 wt% (based on the weight of Ni and Al) is added thereto,  
the weight of Ni =  $58.7 \times 5 = 293.5$  g,  
the weight of Al =  $27 \times 95 = 2565$  g, and  
the weight of W =  $(293.5 + 2565) \times 0.1 = 286$  g.

Thus, when the amount of Ni is minimum and the amount of Al is maximum, the amount of W is  $286/183.9 = 1.6$  mole. Therefore, even when Ni is minimum and W is maximum, the relation of mole numbers is  $W < Ni < Al$ . Accordingly, the above amendment is supported by the Specification.

In the present invention, a gas flow of a perfluorocompound is diluted with nitrogen or air and added steam is brought into contact with a catalyst, which is heated, in a reactor. The catalyst comprises a composite oxide of Ni and Al and a composite oxide of Ni and W, which has been packed in the reactor. The composite oxide of Ni and W, e.g.  $NiWO_4$  activates  $H_2O$ . The composite oxide of Al and Ni, e.g.,  $AlNiO_4$ , decomposes PFC. The coexistence of the composite oxides attains an improvement in the decomposition performance of the PFC.

Conventionally, when components Al, Ni and W are mixed together and heated, a composite oxide of Ni/W is generated first, and thereafter a composite oxide of Al/Ni is generated. As a result, the amount of the composite oxide of Al/Ni is small and the decomposition performance of PFC is deteriorated. In the present invention, the molar amount of Ni is larger than W, and the composite oxide of Ni and

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W, and the composite oxide Al and Ni coexist, which is not obvious to one having ordinary skill in the art. That is, in the present invention, as a result of W being added after generation of the composite oxide Al/Ni, both the composite oxides coexist to attain a high PFC decomposition performance, as represented by the claimed relation of mole numbers in which the mole numbers are in the order of  $W < Ni < Al$ .

JPN '653 does not disclose the relation of mole numbers for W, Ni and Al as set forth in amended claim 6. Therefore, the rejection of claims 6 and 7 under 35 U.S.C. §102(b) as being anticipated by Japanese Patent Publication No. 10-192653 should be withdrawn.

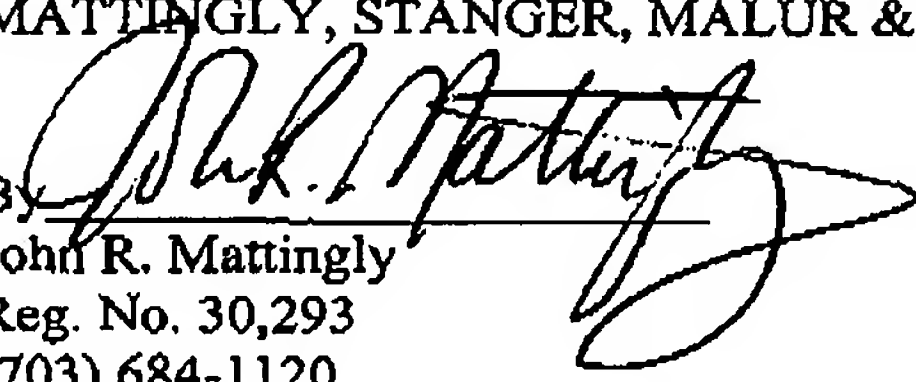
The Examiner recognizes that JPN '653 does not disclose the specific claimed range of Ni/Al mole ratio in combination with the claimed proportion of W as set forth in claims 8 and 9, which depend from claims 6 and 7, respectively. Further, the Ni/Al mole ratio with W in the proportion claimed is not suggested to one having ordinary skill in the art for the foregoing reasons. Accordingly, the rejections under 35 U.S.C. §102(b) and 103(a) should be withdrawn.

### Conclusion

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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Date: September 17, 2007

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In re Patent Application of

S. KANNO et al

Serial No.

Filed: August 20, 2003

For: TREATMENT METHOD FOR DECOMPOSING PERFLUOROCOMPOUND,  
DECOMPOSING CATALYST AND TREATMENT APPARATUS

Papers Filed Herewith:

1. Title Page, Specification (21 pp.), 7 Claims,  
Abstract;
2. Declaration and Power of Attorney;
3. Check #8861 for \$918.00 for Filing Fee;
4. 7 sheets drawings (Figs. 1-7);
5. Information Disclosure Statement,  
PTO-1449 Form, in duplicate; and  
copies of documents cited;
6. Certified copy of JP 2002-247952;
7. List of Inventors' Names and Addresses;
8. Transmittal; and
9. Serial No. postcard.



Receipt is hereby acknowledged of the papers filed, as  
identified in connection with the above-identified patent  
application.

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10/643,946

Treatment method for decomposing perfluorocompound, decomposing catalyst and treatment apparatus

Select New Case	Application Data	Transaction History	Image File Wrapper	Foreign Priority	Published Documents	Address & Attorney/Agent	Display References	Publication Review
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This application is officially maintained in electronic form. To View: Click the desired Document Description. To Download and Print: Check the desired document(s) and click Start Download.

## Available Documents

Mail Room Data	Document Code	Document Description	Document Category	Page Count	
05-17-2007	CTFR	Final Rejection	PROSECUTION	8	<input type="checkbox"/>
05-17-2007	BIB	Bibliographic Data Sheet	PROSECUTION	1	<input type="checkbox"/>
05-17-2007	SRFW	Search information including classification, databases and other search related notes	PROSECUTION	1	<input type="checkbox"/>
02-23-2007	A...	Amendment - After Non-Final Rejection	PROSECUTION	1	<input type="checkbox"/>
02-23-2007	CLM	Claims	PROSECUTION	2	<input type="checkbox"/>
02-23-2007	REM	Applicant Arguments/Benchmarks Made in an Amendment	PROSECUTION	3	<input type="checkbox"/>
02-23-2007	XT/	Extension of Time	PROSECUTION	1	<input type="checkbox"/>
02-23-2007	TRTC	Transmittal to TC	PROSECUTION	1	<input type="checkbox"/>
02-23-2007	136A	Authorization for Extension of Time all replies	PROSECUTION	1	<input type="checkbox"/>
02-23-2007	WFEE	Fee Worksheet (PTO-06)	PROSECUTION	1	<input type="checkbox"/>
08-23-2006	CTNF	Non-Final Rejection	PROSECUTION	6	<input type="checkbox"/>
08-23-2006	1449	List of References cited by applicant and considered by examiner	PRIOR ART	1	<input type="checkbox"/>
08-23-2006	892	List of references cited by examiner	PRIOR ART	1	<input type="checkbox"/>
08-23-2006	SRFW	Search information including classification, databases and other search related notes	PROSECUTION	1	<input type="checkbox"/>
07-26-2006	ELC	Response to Election / Restriction Filed	PROSECUTION	1	<input type="checkbox"/>
06-27-2006	CTRS	Requirement for Restriction/Election	PROSECUTION	5	<input type="checkbox"/>
03-17-2004	CAD	Change of Address	PROSECUTION	1	<input type="checkbox"/>
09-25-2003	CAD	Change of Address	PROSECUTION	1	<input type="checkbox"/>
08-20-2003	TRNA	Transmittal of New Application	PROSECUTION	1	<input type="checkbox"/>
08-20-2003	SPEC	Specification	PROSECUTION	22	<input type="checkbox"/>
08-20-2003	CLM	Claims	PROSECUTION	3	<input type="checkbox"/>
08-20-2003	ABST	Abstract	PROSECUTION	1	<input type="checkbox"/>
08-20-2003	DRW	Drawings	PROSECUTION	7	<input type="checkbox"/>
08-20-2003	OATH	Oath or Declaration filed	PROSECUTION	5	<input type="checkbox"/>
08-20-2003	IDS	Information Disclosure Statement (IDS) Filed	PROSECUTION	3	<input type="checkbox"/>
08-20-2003	FOR	Foreign Reference	PRIOR ART	9	<input type="checkbox"/>
08-20-2003	FOR	Foreign Reference	PRIOR ART	12	<input type="checkbox"/>
08-20-2003	FOR	Foreign Reference	PRIOR ART	7	<input type="checkbox"/>
08-20-2003	FOR	Foreign Reference	PRIOR ART	17	<input type="checkbox"/>
08-20-2003	FOR	Foreign Reference	PRIOR ART	26	<input type="checkbox"/>
08-20-2003	WFEE	Fee Worksheet (PTO-06)	PROSECUTION	1	<input type="checkbox"/>
08-20-2003	WFEE	Fee Worksheet	PROSECUTION	1	<input type="checkbox"/>



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JAPAN PATENT OFFICE

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This is to certify that the annexed is a true copy of the following application as filed with this Office

出 願 年 月 日

Date of Application:

2002年 8月28日

出 願 番 号

Application Number:

特願2002-247952

[ST.10/C]:

[JP2002-247952]

出 願 人

Applicant(s):

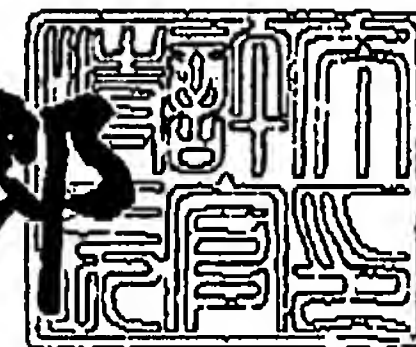
株式会社日立製作所

U.S. Appln Filed 8-20-03  
Inventor: S. Kanno et al  
Mattingly Stanger & Maler  
Docket ASA-1145

2003年 5月13日

特 許 庁 長 官  
Commissioner,  
Japan Patent Office

太田 信一郎



出証番号 出証特2003-3035551